

L Number	Hits	Search Text	DB	Time stamp
1	3474	(gas adj1 sensor).ti.	USPAT; EPO; JPO	2003/07/08 09:29
2	117	(gas adj1 sensor).ti. and second with insulat\$3	USPAT; EPO; JPO	2003/07/08 10:26
110	0	gas adj1 sensor and second with insulat\$3 and (elastic spring) and rotat\$4 and weld\$3 and tack\$4 and press\$4	USPAT; EPO; JPO	2003/07/08 10:42
111	4	gas adj1 sensor and second with insulat\$3 and (elastic spring) and rotat\$4 and weld\$3 and press\$4	USPAT; EPO; JPO	2003/07/08 13:41
112	4	gas adj1 sensor and second with insulat\$3 and (elastic spring) and rotat\$4 and weld\$3	USPAT; EPO; JPO	2003/07/08 13:42
113	52	gas adj1 sensor and second with insulat\$3 and (elastic spring)	USPAT; EPO; JPO	2003/07/08 17:21
114	1165	204/\$.ccls. and gas adj1 sensor	USPAT; EPO; JPO	2003/07/08 14:45
115	40	204/\$.ccls. and gas adj1 sensor and weld\$3 and spring	USPAT; EPO; JPO	2003/07/08 14:49
116	36	73/\$.ccls. and gas adj1 sensor and weld\$3 and spring	USPAT; EPO; JPO	2003/07/08 14:52
117	0	228/\$.ccls. and gas adj1 sensor and weld\$3 and spring	USPAT; EPO; JPO	2003/07/08 14:52
120	5	219/\$.ccls. and gas adj1 sensor and weld\$3 and spring	USPAT; EPO; JPO	2003/07/08 14:53
121	2	29/\$.ccls. and gas adj1 sensor and weld\$3 and spring	USPAT; EPO; JPO	2003/07/08 14:53
122	0	29/240.ccls. and gas adj1 sensor and weld\$3	USPAT; EPO; JPO	2003/07/08 14:54
123	0	29/240.ccls. and gas adj1 sensor	USPAT; EPO; JPO	2003/07/08 14:54
124	0	29/240.ccls. and weld\$3 and laser	USPAT; EPO; JPO	2003/07/08 14:54
125	40	29/593-595,509,609.1.ccls. and weld\$3 and laser	USPAT; EPO; JPO	2003/07/08 16:15
142	1	6222372.PN.	USPAT; EPO; JPO	2003/07/08 16:15
157	12	("4214472" "4309897" "4443781" "4535316" "5490412" "5616825" "5739414" "5874663" "5874664" "5886248" "5955656" "6347543").PN.	USPAT	2003/07/08 16:56
168	9	gas adj1 sensor and rotat\$4 and laser with weld\$3	USPAT; EPO; JPO	2003/07/08 17:24
169	4483	rotat\$4 and laser with weld\$3	USPAT; EPO; JPO	2003/07/08 17:24
170	435	29/\$.ccls. and rotat\$4 and laser with weld\$3	USPAT; EPO; JPO	2003/07/08 17:25
171	156	29/\$.ccls. and rotat\$4 with (device assembly) and laser with weld\$3	USPAT; EPO; JPO	2003/07/08 17:26
-	6	(gas adj1 sensor).ti. and (yamada).in.	US-PGPUB	2003/06/30 13:28
-	30	(gas adj1 sensor).ti. and weld\$3	US-PGPUB	2003/06/30 13:32
-	157	(gas adj1 sensor).ti. and weld\$3	USPAT; EPO; JPO	2003/06/30 13:29
-	12	((gas adj1 sensor).ti. and weld\$3) and rotat\$3	USPAT; EPO; JPO	2003/07/08 09:28
-	62	gas adj1 sensor and weld\$3 and rotat\$3 and press\$3 and diameter	USPAT; EPO; JPO	2003/06/30 13:58
-	6	("4818363" "5031445" "5246562" "5556526" "5573650" "5830339").PN.	USPAT	2003/06/30 13:40
-	8	("4222840" "4717464" "4818363" "4883643" "5139639" "5627306" "5711863" "6067843").PN.	USPAT	2003/06/30 13:41
-	46	gas adj1 sensor and weld\$3 and rotat\$3 and press\$3 and diameter and hous\$3	USPAT; EPO; JPO	2003/06/30 14:36
-	21	(gas adj1 sensor and weld\$3 and rotat\$3 and press\$3 and diameter and hous\$3) and insulat\$3	USPAT; EPO; JPO	2003/06/30 13:59

-	63	gas adj1 sensor and weld\$3 and insulat\$3 and larger and diameter and hous\$3	USPAT; EPO; JPO	2003/06/30 14:05
-	7	gas adj1 sensor and weld\$3 with laser and rotat\$3 and press\$3 and diameter and hous\$3	USPAT; EPO; JPO	2003/06/30 14:38
-	1	gas adj1 sensor and weld\$3 with laser and porcelain and press\$3 and diameter and hous\$3	USPAT; EPO; JPO	2003/06/30 14:41
-	12	("4214472" "4309897" "4443781" "4535316" "5490412" "5616825" "5739414" "5874663" "5874664" "5886248" "5955656" "6347543").PN.	USPAT	2003/06/30 14:40
-	0	gas adj1 sensor and weld\$3 with laser and porcelain with insulat\$3 and elastic	USPAT; EPO; JPO	2003/06/30 14:43
-	0	gas adj1 sensor and weld\$3 with laser and porcelain and insulat\$3 and elastic	USPAT; EPO; JPO	2003/06/30 14:43
-	1	gas adj1 sensor and porcelain and insulat\$3 and elastic	USPAT; EPO; JPO	2003/06/30 14:44
-	0	gas adj1 sensor and porcelain and elastic	USPAT; EPO; JPO	2003/06/30 14:44
-	1	gas adj1 sensor and porcelain and elastic	USPAT; EPO; JPO	2003/06/30 14:45
-	95	gas adj1 sensor and insulat\$3 and elastic	USPAT; EPO; JPO	2003/06/30 14:50
-	27844	gas adj1 sensor and insulat\$3 and elastic weld\$3 and laser	USPAT; EPO; JPO	2003/06/30 14:50
-	6	gas adj1 sensor and insulat\$3 and elastic and weld\$3 and laser	USPAT; EPO; JPO	2003/06/30 14:50
-	1	5573650.pn.	USPAT; EPO; JPO	2003/07/07 17:51
-	496	(abe and noriyuki).in.	USPAT; EPO; JPO	2003/07/07 17:51
-	16	(abe near2 noriyuki).in. and sensor	USPAT; EPO; JPO	2003/07/07 17:53
-	2	3273155.URPN.	USPAT	2003/07/07 17:52
-	13	(sensor).ti. and weld\$3 and cover\$4 and porcelain	USPAT; EPO; JPO	2003/07/07 17:55

US 20020038793 A	20020404	Manufacturing method of gas sensor and manufacturing machine therefor	219/121.64	Yamada, Hirokazu et al.
US 6477887 B1	20021112	Gas sensor having pre-stressed terminal for contact with inserted sensor element	73/31.05	Ozawa, Masato et al.
US 6415647 B1	20020709	Compact structure of gas sensor and production method thereof	73/31.05	Yamada, Hirokazu et al.
US 6214186 B1	20010410	Gas sensor having improved structure for installation of protective cover	204/428	Watanabe, Isao et al.
US 6093295 A	20000725	Gas sensor	204/427	Zhuiykov, Serge et al.
US 6015533 A	20000118	Sensor housing for a calorimetric gas sensor	422/83	Young, Daniel A. et al.
US 4556475 A	19851203	Electrochemical gas sensor probe construction	204/427	Bayha, Kurt et al.
US 5490412 A	19960213	Exhaust sensor with removable electrical connector	73/23.31	Duce, Richard W. et al.
US 5435735 A	19950725	Catalytic converter sensor connector	439/79	Wittig, Lutz et al.
US 5329806 A	19940719	Exhaust sensor with tubular shell	73/31.05	McClanahan, Mark R. et al.
US 4395989 A	19830802	Fuel injection apparatus and system	123/478	Eshelman, Philip V. et al.
US 5830339 A	19981103	Gas concentration detector	204/426	Watanabe, Isao et al.
US 5573650 A	19961112	Gas sensor	204/424	Fukaya, Kenji et al.
US 6246000 B1	20010612	Electric contact element	174/74R	Wehrmann, Johann et al.
US 5948963 A	19990907	Gas sensor	73/23.2	Kato, Nobuhide et al.
US 5811660 A	19980922	Air-fuel ratio sensing element	73/23.32	Nakano, Syuichi et al.
US 4824550 A	19890425	Heated solid electrolyte oxygen sensor and securing element therefor	204/427	Ker, Eric L. et al.
US 4401967 A	19830830	Gas sensor	338/34	Miwa, Naoto et al.
US 4199423 A	19800422	Heated electrolyte exhaust gas sensor and method of making it	204/429	Mann, Gaudur S.
US 6347543 B1	20020219	Measuring sensor and method for its fabrication	73/23.31	Geier, Heinz et al.
US 5874664 A	19990223	Air fuel ratio sensor and method for assembling the same	73/23.32	Watanabe, Isao et al.
US 5874663 A	19990223	Waterproof structure for an air-fuel ratio sensor	73/23.32	Fukaya, Kenji et al.
US 3815560 A	19740611	IGNITION SYSTEM FOR INTERNAL COMBUSTION ENGINES	123/406.52	Wahl, Josef et al.
US 6360581 B1	20020326	Gas sensor and method for manufacturing the same	73/23.2	Murase, Masaaki et al.
US 6319378 B1	20011120	Gas sensor having improved structure	204/427	Kojima, Takashi et al.
US 5949023 A	19990907	Temperature-resistant cable bushing and method for the manufacture of the same	174/77R	Weyl, Helmut
US 5785829 A	19980728	Gas concentration sensor	204/427	Watanabe, Tsao
US 4362609 A	19821207	Oxygen concentration sensor	204/428	Sano, Hiromi et al.
US 6463788 B2	20021015	Structure of electric connector of gas sensor	73/31.05	Nakano, Norihiko et al.
US 4560463 A	19851224	Gas sensor, particularly oxygen sensor exposed to combustion exhaust gases	204/424	Frey, Thomas et al.
JP 2001141689 A	20010525	GAS SENSOR		SUGINO, HIROSHI et al.
EP 1139095 A2	20011004	Structure of gas sensor		KOJIMA, TAKASHI
US 4556475 A	19851203	Electrochemical gas sensor probe construction	204/427	Bayha, Kurt et al.
US 5139639 A	19920818	Electrochemical type exhaust gas oxygen sensor	204/427	Holleboom, Bruce W.
US 6408680 B1	20020625	Sensor and method for the manufacture	73/23.31	Friese, Karl-Hermann et al.
US 6222372 B1	20010424	Structure of gas sensor	324/464	Fukaya, Kenji et al.
JP 57055060 A	19820401	LASER WELDED MOUTH SEALING DEVICE		IKEDA, KONOSUKE et al.

US 4730389 A	19880315	Method for fabrication of an implantable hermetic transparent container	29/825	Baudino, Michael D. et al.
US 4987519 A	19910122	Hermetically sealed aluminum electrolytic capacitor	361/518	Hutchins, Clinton E. et al.
US 5247736 A	19930928	Method of manufacturing a multipiece eccentric shaft	29/888.022	Fraser, Jr., Howard H. et al.

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(71)出願人 000004260
株式会社デンソー
愛知県刈谷市昭和町1丁目1番地
(72)発明者 児島 孝志
愛知県刈谷市昭和町1丁目1番地 株式会
社デンソー内
(74)代理人 100079142
弁理士 高橋 祥泰
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(54)【発明の名称】 ガスセンサ

(57)【要約】

【課題】 第1絶縁碍子の破損が生じ難いガスセンサを提供すること。

【解決手段】 ハウジング10内に挿入配置される第1絶縁碍子11と、該第1絶縁碍子11の基端部端面110に直接当接して配置された第2絶縁碍子12とよりなり、と共に、上記第1絶縁碍子11は上記ハウジング内側面101に突出形成された碍子受け面100に対し環状パッキン102を介して配置されており、上記第1絶縁碍子11と上記第2絶縁碍子12との当接部13は上記環状パッキン102の外形を第1絶縁碍子11の基端部端面110に対し投影した投影範囲W内に実質的に位置している。

(図1)

